



## CITY OF LODI COUNCIL COMMUNICATION

**AGENDA TITLE:** Approve Request for Proposal to Provide Professional Services for Preliminary Engineering Work on the Westside Substation (EUD)

**MEETING DATE:** October 21, 2009

**PREPARED BY:** Interim Electric Utility Director

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**RECOMMENDED ACTION:** Approve request for proposal to provide professional services for preliminary engineering work on the Westside Substation.

**BACKGROUND INFORMATION:** The Electric Utility Department (EUD) has planned to build a fifth substation at the western area of the City limits. The substation site has been in Lodi's electric facilities plan for some time and was purchased in 2003 as land was available. The working name for the planned facility is the Westside Substation. This substation will be required for continued reliable service to new and existing customers.

The request for proposal will cover the preliminary engineering and design activities on the new Westside Substation. The initial task list includes the following:

1. Soil resistivity test and geotechnical study
2. Preliminary ground grid design as per IEEE Standard 80
3. Ground potential rise (GPR) study
4. Preparation of preliminary substation layout, design criteria, and cost/benefit analysis
5. Engineering and design of perimeter block wall fence and landscape

Items 1 and 2 are needed to complete the GPR study, which will be provided to the telephone and communication companies for ground fault protection. Item 4 will be the basis for developing the final substation facility design. Final design, permitting, and construction activities would follow the completion of item 5.

The location of the new Westside Substation provides a strategic site for power system interconnection within the City of Lodi boundaries. The existing 60kV loop will terminate in the substation. The other planned 60kV line from the Industrial Substation traversing via Harney Lane through Lower Sacramento Road will also terminate in the substation. On June 3, 2009 as per Resolution No. 2009-74, the City Council awarded the preparation of Lodi West 60kV Power Line Project environmental impact report to InSite Environmental, Inc. A double-circuit, 60kV transmission line, once completed, will connect to the Westside Substation. The substation facility will provide load serving capacity to planned development projects like Westside Project, Southwest Gateway Project and other identified annexation areas with a total estimated load of approximately 16MW. The Westside substation will be used to reduce existing loads from the Henning Substation.

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APPROVED:

A handwritten signature in black ink, appearing to read "Blair King", written over a horizontal line.

Blair King, City Manager

The construction of new substation facility entails tasks requiring lengthy execution, adjustment, and design and engineering activities as described in the attached Exhibit A. Therefore, staff is requesting City Council approval of the request for proposal for the preliminary engineering work on the Westside Substation.

**FISCAL IMPACT:** The estimated cost is \$150,000.

**FUNDING AVAILABLE:** From Account No. 161677 with additional fund transfer of \$30,000 to this account from Account No. 161651.

  
Jordan Ayers  
Deputy City Manager/Internal Services Director

  
Kenneth A. Weisel  
Interim Electric Utility Director

**PREPARED BY:** Demy Bucaneg, Jr., P.E., Assistant Electric Utility Director, Engineering & Operations

KW/DB/lst

Attachments (1)

## Westside Substation Timetable

### I. Preliminary Engineering Phase

- Soil resistivity test = 1 week
- Preliminary ground grid design = 2 weeks
- GPR study = 2 weeks
- Preparation of preliminary substation layout, design criteria, and cost/benefit analysis = 5-6 months
- Engineering and design of perimeter block wall = 4-6 months

### II. Block Wall Construction

- Environmental study - to be determined. If an exemption = 1 week
- Approval and advertisement = 1-2 months
- Bid process = 1 month
- Award and contract approval = 2-3 months
- Permitting = 2 weeks
- Construction and turnover = 4-5 months

### III. Substation Final Design Phase

- Approval of engineering services and advertisement = 1-2 months
- Bid process = 2-3 months
- Award and contract approval = 2-3 months
- Engineering and design = 10-12 months
- Approve plans and specifications = 1-2 months
- Prepare specifications for long lead-time equipment = 2-3 months
- Approval and advertise equipment specifications = 1-2 months
- Bid process = 1-2 months
- Award and PO approval = 1 month
- Order and delivery = 14-18 months

### IV. Environmental Study

- Initial study = 3-4 months
- Public hearings = 2-3 months
- Negative declaration approval = 2-3 months

### V. Substation Construction

- Advertise and bid process = 2-3 months
- Award and contract approval = 2-3 months
- Construction = 10-12 months
- Test and commissioning and turnover = 1 month

Note: Estimated three to three and a half year Westside Substation development.